



SepiSolar™  
POWER BY DESIGN

# SepiSolar: Solar PV, Energy Storage, Microgrid System Design, and Consulting Services



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## A FEW WORDS ABOUT SEPI-SOLAR'S NAME, MISSION, AND CORE VALUES

People often ask me, "What Does 'Sepi' mean?" "Sepideh" —or "Sepi" for short—is the moment just before the first light of dawn. All of the sun's power emerges out of that first ray. In the same way, solar projects and the power that is later generated emerge out of SepiSolar designs.

### OUR MISSION

SepiSolar's mission is "To build a community of designers who care about solving tomorrow's energy problems today."

These may seem like just a few words, but they're truly meaningful for all of us here at SepiSolar.

We genuinely care about our work, each other, our clients, and the community.

In fact, the community of designers that we're building includes everyone. How people create and use energy guides our solutions for transitioning the world to renewables and a much more intelligent grid.

### OUR CORE VALUES

## How we design reflects our core values of **TRUE PV**

<b>T</b>	<b>R</b>	<b>U</b>	<b>E</b>	<b>P</b>	<b>V</b>
<b>TRUST</b>	<b>RELIABLE</b>	<b>UNITED</b>	<b>EDUCATIONAL</b>	<b>PERSONAL</b>	<b>VISIONARY</b>
We are honest and clear about what we say and do.	We are committed to delivering what we promise.	We work together for a common goal, for ourselves, customers, and advocates.	We are always learning, evolving, and sharing our knowledge and expertise with each other and our communities.	We care about each other, our customers, and everyone we touch.	We are always thinking about and preparing for the future.

We hope you'll see these values and mission in our team and in our future work together.



Sincerely,

Joshua Weiner  
President and CEO, SepiSolar  
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## ABOUT SEPISOLAR

Founded 2009 by Joshua Weiner, SepiSolar is a national design and engineering firm dedicated to the efficient development of solar photovoltaics, energy storage systems, and microgrids.

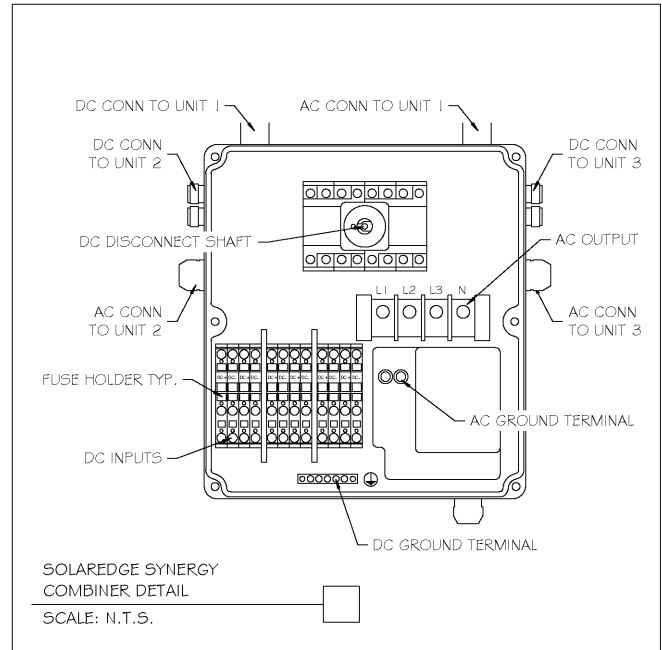
**Location.** SepiSolar's offices are located in the Warm Springs section of Fremont, California offices. While we are based in California, we hold structural and electrical P.E. licenses and direct partner resources for all 50 states.

**Team.** The majority of SepiSolar employees are North American Board of Certified Energy Practitioners (NABCEP) certified or working towards their certification. In addition to their commitment to keeping up with the latest technology and best practices, SepiSolar also requires each engineer to participate in at least one solar project installation per year. This commitment provides team members with valuable "on-the-front-lines" insights that we record and incorporate into our designs and processes.

**Technology.** SepiSolar has developed proprietary tools that create solar and storage designs that achieve faster permitting approvals, utility interconnection approvals, and construction timelines. In fact, the majority of SepiSolar designs receive approval without revisions. Our technology is also flexible, allowing Helioscope, Aurora, and other third-party proposal tools to be seamlessly incorporated into our full plan sets.

**Customer Service.** SepiSolar takes a customer-satisfaction approach to system design and engineering to ensure that our client's unique project requirements are met and exceeded. Each design project begins with a kick-off call with a senior engineer that ensures that data is accurate and complete. The SepiPortal, our customer care community, serves as a central hub for project information and deliverables. It includes a chat function, allowing for direct communication between you and your project's designer.

**Innovation.** Although "solar" is part of our name, SepiSolar is also an innovator in energy storage. Our founder, Josh Weiner, was one of the co-founders of Green Charge Networks (later acquired by Engie). With our proprietary energy storage modeling tools, we consult with cutting-edge storage manufacturers and policymakers to advance the development and seamless integration of solar, batteries, and the grid.



Details are one of the reasons why SepiSolar permits are often approved without revisions.

## EXPERIENCE

Since its inception in 2009, SepiSolar has designed:

- 6.5 GW+ commercial and utility-scale systems
- 15,500+ residential systems
- 12+ demand-charge-management energy storage projects

Projects utilizing Roof-Mounts, Ground-Mounts, Carports (Parking Canopies), Trackers (single-axis, dual-axis, azimuth), Energy Storage (off-grid, back-up, on-grid, peak-shaving, load-leveling, microgrids), Wind Turbines, Direct-Burial, Cable Tray, Wire Harnesses, DC-DC Converters/Optimizers, Tilt-Up Racking Systems, Ballasted Systems, Distributed vs Centralized Inverter Designs, etc.

## SOME PAST PROJECTS



### Multi-Contact, Windsor, CA

- 201.6 kW
- 840 Solar Modules
- 1 Inverter
- Roof-Mounted
- Installer: West Coast Solar Energy



### Mercedes Benz - Fresno, CA

- 396 kW
- 1524 PV Modules
- 403 Ballast Mounts and 656 Ballast Blocks
- 10 Inverters w 999 optimizers
- Installer: A tech construction



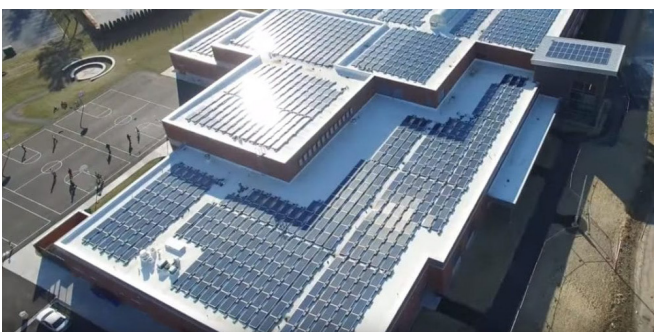
### Brandt Farms, Reedley, CA

- 1167 kW
- 3764 PV Modules
- Ground Mount (Single Axis Tracker)
- 35 Inverters
- Installer: Kliewer Construction



### Sonic Manufacturing Technologies, Fremont, CA

- 749 kW
- 1998 PV Modules
- Roof-mounted
- 17 Inverters w 999 optimizers
- Installer: Mynt Systems



### Wild Lake Middle School, Maryland

- 345 kW flat roof & 198 kW fixed tilt
- 1450 PV Modules
- Net Zero Energy
- Installer: TCW Architects/Pfister Energy

# TERRITORIES, MARKETS & APPLICATIONS

Territories	Markets	Applications
<ul style="list-style-type: none"><li>• All 50 States</li><li>• International</li></ul>	<ul style="list-style-type: none"><li>• Residential</li><li>• Commercial &amp; Industrial</li><li>• Agricultural</li><li>• Utility-Scale</li></ul>	<ul style="list-style-type: none"><li>• Solar PV</li><li>• Energy storage (DC- or AC-coupled)</li><li>• Micro-grid design (DC- or AC-coupled)</li><li>• Integration with other sources (diesel, wind, etc.)</li><li>• Grid-connected, off-grid or hybrid</li><li>• EV chargers (including levels I, II, III)</li></ul>

## OUR COMPLETE SCOPE OF SERVICES

With over a decade of experience in solar design, engineering, and project management, SepiSolar strives to eliminate the hassles of design, engineering and permitting for solar and energy storage.

In addition, SepiSolar provides project development, technical due diligence, policy, and financial, and Salesforce consulting services for solar and energy storage companies.

### Design & Engineering Packages

- Title page
  - Project scope & description
  - Sheet index
  - Governing codes
  - Construction notes
  - Vicinity, parcel & aerial maps
- PV array layout & equipment locations
- Balance-of-system (BOS) elevations & details
- Anchorage method & details
- Electrical plan
- String diagram
- Conduit runs
- Wire diagram, including calculations for:
  - String sizing
  - Wire & conduit sizing
  - OCP sizing & fault current
  - Voltage drop
- Grounding details
- Electrical interconnection details
- System & equipment specifications
- Labels & markings
- Version control & revisions

### Electrical Engineering

- Licensing in all 50 states
- Professional Engineering stamps/seals & design review
- Smell tests & feasibility analysis
- Energy Storage
  - Utility-interactive (DCM, TOU arbitrage, ADR, DRAM)
  - Off-grid (backup, emergency)
  - Bimodal/Hybrid
  - Integration with other sources (smoothing, ramp control, spinning reserves, T&D deferral, etc.)
- DC- & AC-coupling
- Direct burial, overhead, raceways, cable tray, and wire harnesses
- DC-DC converters
- Transformers
- Distributed & centralized inverter architectures
- Protection relays
- Low & Medium Voltage
- Wire & conduit sizing
- OCPD sizing, coordination studies & fault current
- Voltage drop calculations
- Grounding details
- POC/Interconnection design & troubleshooting
- Arc flash study

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## Structural/Civil Engineering

- Licensing in all 50 states
- Professional Engineering stamps/seals & design review
- Smell tests & feasibility analysis
- Roof mounts (pitched or flat)
- Ground mounts (fixed-tilt, 1-axis & 2-axes tracking)
- Carports/Parking Canopies
- Single-cantilever
- Double-cantilever
- Tabular
- Custom structures
- Geo-technical analysis
- Stormwater drainage
- Landscaping and tree removal
- Foundation design
  - Concrete
  - I-beams/Piles
  - Ground screws
  - Spread footing
- Anchorage design
  - Ballasted
  - Penetrating
  - Hybrid

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## Site Survey

- Data acquisition
- Shading analysis
- Sales verification
- On-site discovery, analysis & troubleshooting with key team members
- Photos, sketches, design
- Equipment location identification
- Feasibility analysis
- Inspection services
- Pre-construction
- Post-construction
- Production/Performance verification of monitoring

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## Sales/Proposal Support

- Pre-design/Layouts (to-scale)
- 3D renderings
- RFP response
- Equipment cost/benefit analysis
- Structural “smell tests”
- Electrical “smell tests”
- Production/Performance modeling
  - Weather station
  - System characterization
  - Degradation & losses
  - Optimization & mitigation strategies
- Economic/Financial analysis
  - Utility bill analysis
  - Interval data analysis
  - Revenue & cost modeling
  - Cash flow analysis, IRR, NPV
- System sizing
  - PV
  - Energy storage
  - Micro-grid with other sources

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## Utility Interconnection

- Interconnection application processing & troubleshooting
- Utility infrastructure upgrade design & mitigation strategies
- Real-time requirements database
- Response letters/meetings
- Preliminary SLDs with EE stamps

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## Consulting

- Independent Engineering Design reviews
  - Code compliance
  - Health & safety
  - Technical underwriting
  - Due diligence for bankability studies
- New Product Development
  - R&D
  - Requirements specifications
  - Regulatory & certification (UL) compliance
  - Grant/RFP writing
  - IP development
- Business Development
  - Sketch-to-Scale & commercialization
    - Financial modeling
    - Form, fit, function & corporate development
- Policy Development
  - NEM
  - SGIP
  - CALSSA (fka CalSEIA)
  - DRP Technical Committee
  - Storage Technical Committee

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## Miscellaneous

- City/County Permitting
  - Real-time requirements database
  - Response letters with cloud & delta references
  - Code & plan check troubleshooting & negotiating
  - Plan check submission, processing and pickup
- Construction Support
  - Inspector sign-off support & troubleshooting
  - Commissioning & system startup
  - As-builts
  - Change/Revision management as a result of field verification
- Rebate/Incentive Processing
  - SGIP
  - ITC eligibility & applicability: PV, ES, PV + ES
  - Local incentives
  - SRECs
- Owner's Engineering:
  - RFP development, bid management & vendor qualification
  - Performance & installation quality verification for asset transfers

## SOME OF OUR CLIENTS



## CLIENTS TESTIMONIALS



*"SepiSolar has been a trusted and reliable partner for the last 5 years. We rely on their industry knowledge, professionalism, quality of deliverables, and competitive pricing. They are more than a design/engineering provider; they are an industry resource in PV and energy storage."*

**Michael V. Garcia,**

V.P. of Product Development & Procurement, PetersenDean Roofing and Solar



*"Using SepiSolar for designing and engineering Swell Energy's solar-plus-storage systems was a no-brainer. Storage is complicated, so we wanted to work with a team of U.S.-based quality engineers who could speak 'fluent storage' and get out accurate plan sets quickly and with minimal AHJ revisions. If you're looking for a quality design partner who knows how to get storage permit plans approved in California, trust the SepiSolar team."*

**Andrew Meyer,**

Co-Founder, Swell Energy



*"Xero Solar stands behind all of our installations, and this is only as good as the design they are built on. We need to have confidence that we're building systems based on sound technical plans and designs. Plans that we have confidence that will result in safe, effective, and compliant systems is crucial. The price of failure with defects on a finished project is severe, and it's simply not worth trying to save a few dollars upfront only to be bitten down the road with failures. That's why we partner with SepiSolar for all of our engineering and design needs for solar and storage."*

**Ben Lichtenberg,**

CEO of Xero Solar



*"We submitted our RFP proposal to the utility today, and I wanted to thank SepiSolar for the excellent service you provided. Your ability to provide a detailed engineering design on a tight turnaround time was impressive. Your input helped us secure an updated solar design that met all of the RFP's requirements. We look forward to working with SepiSolar again on future projects."*

**Travis Stowers,**

Power System Application Engineer

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Thank you for your interest in SepiSolar's design, engineering, and project development services. Please contact us if you have questions or require more information.